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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/625,176 | 07/23/2003 | Christoph Meyer | 03630-P0034A | 8247 |
| 24126 | 7590 | 06/03/2005 | EXAMINER | |
| ST. ONGE STEWARD JOHNSTON & REENS, LLC 986 BEDFORD STREET STAMFORD, CT 06905-5619 | | | DUDA, RINA I | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2837 | |

DATE MAILED: 06/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/625,176 | MEYER ET AL. | |
| | Examiner Rina I. Duda | Art Unit 2837 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 18 April 2005.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-8 and 29-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-8 and 29-45 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 2/2/05 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892).
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4/18/05
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 4/18/05 has been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). The term "retarded" in claims 1-8 and 29-45 is indefinite because the specification does not clearly redefine the term, the accepted meaning is "slow or limited in intellectual or emotional development or academic progress." Furthermore, the term "valve" has been used to describe a switch or a device for controlling the flow of current/voltage through the motor windings, while the accepted meaning is "any

mechanical device by which the flow of liquid, gas, or loose material may be started, stopped, or regulated by a movable part that opens, shuts, or partially obstructs one or more ports or passageways".

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-4, 35, 40, 42-43, and 45 are rejected under 35 U.S.C. 102(b) as being anticipated by Rosa (US patent 6104155), of record.

Claim 1, Rosa teaches a control system for a motor comprising a field winding 112, a commutating armature 111 connected to the field winding, a first valve 118 in series with said armature winding and the field winding for connecting the winding to the power supply when the motor is in an operating mode, a second valve 115 for bypassing the armature when the motor is in a braking mode, a third valve 121 connected at least across the field winding 112, a fourth valve 116 connected the field winding to the power supply during the braking mode, and a control unit 117 for controlling the various valves and controlling the voltage across the field winding when the motor is in the braking mode.

Claims 2-4, Rosa describes in column 6 lines 1-6 that the switches could also be TRIACs.

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Claims 35, 42, and 43, Rosa describes a control system for a motor comprising a field winding 112, a commutating armature 111 connected to the field winding, a first valve 118 in series with said armature winding and the field winding for connecting the winding to the power supply when the motor is in an operating mode, a second valve 115 for bypassing the armature when the motor is a braking mode, a third valve 121 connected at least across the field winding 112, and a control unit 117 for controlling the various valves and controlling the voltage across the field winding when the motor is in the braking mode.

Claims 40 and 45, Rosa describes in column 6 lines 1-6 that switch 118 could be a TRIAC.

6. Claims 29, 31, and 33 are rejected under 35 U.S.C. 102(b) as being anticipated by Gross (US patent 3872363), of record.

Claim 29 and 31, Gross teaches a control system for a motor comprising field windings 15/17, an armature winding 13, a first valve D7 connected at least across winding 15, a second valve Q1 connected at least across winding 17, wherein said first and second windings are used in the operating and braking mode of the motor.

Claim 33 (as amended by the examiner in communication dated 3/10/05), Gross describes that one of the valves is a TRIAC as seen in figure 1

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 5-6, 8, 36, and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rosa (US Patent 6104155), of record and Canova (US Patent 5828194), of record.

The difference between the teachings of Rosa and the subject matter of claims 5-6, 8, 36, 38 is that the claims recite that the valve connected to the armature winding is a transistor controlled by a PWM means and that the control unit is a microcontroller using a DC power supply.

Canova teaches a control system for an electrical motor comprising armature winding 15, field winding 13, a transistor 5 connected to the armature winding and the power supply, a microcontroller 11 for controlling the transistor using PWM techniques, and a power supply 1.

Therefore, it would have obvious to use a transistor in series with the armature winding to control the voltage through the winding, since transistors easily change the configuration of the motor in order to recuperate energy during the braking phase of the motor.

9. Claims 37, 39, 41, and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rosa (US Patent 6104155), of record and Canova (US Patent 5828194), of record as applied to claim 36 above in further view of Gross (US patent 3872363), of record.

The difference between the teachings of Rosa and Canova and the claimed subject matter of claims 37 and 41 is that claims 37 and 41 recite that an AC power

supply is connected to a rectifier. Although, converting an AC signal into a DC signal using rectifiers is obvious to one person of ordinary skilled in the art, Gross is presented to describe how the AC signal connected to inputs lines L1 and L2 is converted to a DC signal using a rectifier including diodes D1-D4.

Claims 39 and 44, the only thing not taught by Rosa/Canova is using diodes across field windings. However, Gross teaches D7 connected to field winding 15 for controlling the voltage through the winding.

Therefore, it would have obvious to one person of ordinary skilled in the art to use a diode across the field winding to control the flow of voltage, since diodes conduct electric current in only one direction and used as voltage regulators.

10. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gross (US patent 3872363), of record and Kofink (US patent 4239978).

The only difference between claim 30 and the teachings of Kofink is that the claim recites that the filed windings would be connected in a star configuration.

However, Kofink teaches a method for supplying power to a motor, which includes three field windings connected in star configuration.

The amount of phases/windings is a design choice, since depending upon the intended use of the system, the designer may choose to have a single motor, a two-phase motor, or like in this case a three-phase motor.

Claim Objections

11. Claims 7, 32, and 34 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the

limitations of the base claim and any intervening claims and if they are amended to overcome the USC 112 second paragraph rejection.

Specification

12. A substitute specification in proper idiomatic English and in compliance with 37 CFR 1.52(a) and (b) is required. The specification must redefine the terms "valve" and "retarded" or those terms must be removed from it. The substitute specification filed must be accompanied by a statement that it contains no new matter.

Drawings

13. The drawings are objected to under 37 CFR 1.83(a) because they fail to show the optical coupling device as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either

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"Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rina I. Duda whose telephone number is 571-272-2062. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Martin can be reached on 571-272-2107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RD



RINA DUDA
PRIMARY EXAMINER